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STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING

RICK SNYDER
GOVERNOR

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March 16, 2012

Mr. Michael Berkoff
United States Environmental Protection Agency
Region 5
77 West Jackson Boulevard (SRF-6J)
Chicago, Illinois 60604-3507

Dear Mr. Berkoff:

SUBJECT: Comments on the Certification of Completion of the OU4 Remedial Action (Final Construction Completion Report), Allied Paper Inc./Portage Creek/ Kalamazoo River Superfund Site, Operable Unit 4 (OU4): 12th Street Landfill

The Michigan Department of Environmental Quality (MDEQ) has received (December 27, 2011) and reviewed the Certification of Completion of the OU4 Remedial Action (Final Construction Completion Report) [CCR] for the 12th Street Landfill, Operable Unit 4 of the Allied Paper Inc./Portage Creek/Kalamazoo River Superfund Site, prepared by Conestoga-Rovers & Associates (CRA) on behalf of Weyerhaeuser NR Company. The MDEQ appreciates the opportunity to assist the United States Environmental Protection Agency (USEPA) by providing comments on the CCR for the 12th Street Landfill.

Comments are presented in the same order as the sections of the CCR.

General

This is the first submittal of the CCR and it, therefore, should not be titled "Final." The December 27, 2011, submittal should be considered draft until approval and acceptance has been granted from the USEPA.

As the CCR is a stand-alone document for future use over a long time period, all referenced drawings, specifications, and sections of the Final Design Report and any other referenced document need to be included as attachments to the CCR.

The CCR appears to be the combination of the required reports (the Certification of Completion of Construction Report and the Certification of Completion of the OU4 RA [Remedial Action] Report) from the Scope of Work (Appendix E) to the United States of America v. Weyerhaeuser Company Consent Decree, Civil Action No. 1:05CV0003, February 15, 2005. As such, the CCR needs to include sufficient information and details from the previously completed emergency response actions to demonstrate completion of all parts of the RA. The summary and presentation of the RA work

completed in 2010 and 2011 are not sufficient to demonstrate completion of the entire OU4 RA.

A full and complete, stand-alone set of as-built drawings will need to be prepared to accurately present all aspects of the constructed remedy and reflect field modifications made during the RA. It is not acceptable to provide a select number of new drawings in the CCR and reference final remedial design (RD) drawings. In the event a designed feature was not modified during the RA, that feature will need to be again presented in the final as-built drawing set. Additionally, construction completion drawings from the emergency response action work completed in 2007 will need to be incorporated into the as-built drawing set.

A full size set of as-built drawing will need to be submitted with the CCR.

The CCR needs to include a section describing deviations from the approved RD to document design and/or construction changes that occurred during the RA with supporting documentation for each design and/or construction change. A summary log of the modifications and/or deviations needs to be included as an attachment to the CCR.

Section 1.1 - Purpose of the Certification of Completion of the OU4 Remedial Action Report

The fifth bullet of this section identifies as-built drawings for any additional work completed since the Final Certification Inspection as included in the CCR. The appropriate set of as-built drawings documents and accurately presents all aspects of the constructed remedy and reflects field modifications made during the RA, not just any additional work completed since the Final Certification Inspection. It is necessary to present a full and complete set of as-built drawings for the entire remedy.

This section needs to provide a summary of all the work activities that cumulatively represent the completion of the OU4 RA, provide a framework for what will be presented within the CCR, and discussion of how previously completed work and the work summarized within demonstrate completion of the OU4 RA.

Section 2.1 - Site Setting and Features

This section indicates that the site is fenced, gated, and locked; however, based on site visits during 2011 it appears that pedestrian access is possible between the gate and the fence at the 12th Street gate location and also via the Michigan Department of Natural Resources (MDNR) property near the Kalamazoo River access point. This section needs to reflect the current site fencing/pedestrian access points.

Section 2.2.2 - 12th Street Landfill Historical Operations and Current Conditions

This section needs to provide more detail on the construction activities completed at the eastern slope of the landfill in 2007 instead of referencing back to the Remedial Design Report. The appropriate sections of the Final Remedial Design Report need to be presented or appended to the CCR.

This section needs to clarify the significance of the referenced elevation of 703.0 feet mean sea level.

It appears that the RD drawing plan set has been inadvertently omitted as a bulleted item of the Final Design Report in the last paragraph of this section.

Section 2.3.1 - Remedial Action Objectives
The first bullet of this section needs to include the MDNR property as an adjacent property in addition to the asphalt plant property.

Section 3.0 - Summary of the Completed RA/Construction Activities
This section needs to include a summary of the site mobilization, site preparation, soil erosion and sedimentation control, removal of existing groundwater and landfill gas monitoring wells, landfill grading, passive gas management system, gas vents, etc., activities associated with the construction and completion of the RA. It is necessary to report and document the release and abatement of clean fill to the Kalamazoo River that occurred in October 2010.

Section 3.3 - As-Built Drawings
The provided sub set of drawings (C-01 through C-07) is not sufficient to constitute the full set of as-built drawings needed for construction completion approval. Further comment related to as-built drawings is provided in the General Comments section of this letter.

Section 3.4 - Technical Specifications
This section needs to discuss and update the technical specifications for any design and/or construction changes made during the RA, e.g. silt fencing and stone aggregate for construction entrances.

Section 3.6 - Summary of Completed Scope of Work Related to the RA
This section and all the subsections of this section do not describe the completed scope of work (SOW) related to the RA. It appears the activities described are limited to the excavation of paper residuals outside the landfill footprint and restoration of disturbed areas. The complete SOW related to the RA generally, per Section II of the SOW, includes:

- excavation of polychlorinated biphenyl (PCB) contamination on and beyond Weyerhaeuser property
- consolidation of the excavated materials into the landfill
- capping the landfill
- erosion protection and containment system
- short-term and long-term monitoring
- leachate collection
- fencing and permanent markers
- deed restrictions
- long-term maintenance
- other provisions

It is noted that some of these topics are discussed in varying detail in later sections of the CCR; however, all of them will need to be adequately discussed and documented.

Section 3.6.1.4 - Excavation of Paper Residuals on the Asphalt Plant Property
The actual volume of paper residuals excavated from the asphalt plant property needs to be calculated and presented in this section.

Section 3.7 - Additional Tasks and Changes to Completed Scope of Work Related to the RA
This section needs to include a discussion of the alterations that were made to the subgrade grading plan that resulted from a lesser residuals volume to be incorporated into the landfill. This section also needs to discuss all other design and/or construction modifications from the RA period.

Section 3.7.1.1 - Leachate Extraction/Collection Activities
This section needs to provide the details of temporary extraction well construction and installation and provide well construction and boring logs.

The term "recharge" needs to be defined to understand the elevation or depth to water that was required before pumping commenced.

The leachate pumping duration logs and extraction volume summaries need to be included as appendices to the CCR.

Section 3.7.1.4 - Slope Stability/Uplift Assessment
The analysis presented in this section needs to be supported with documentation and specific values of leachate saturation or level, factor of safety, etc.

This section states that, "However, the six-inch sand layer, which was placed between the paper residuals and the liner, will provide relief of any pressure caused by the leachate preventing any uplift pressure to [and] from beneath the liner, and minimize, if not virtually eliminate, the accumulation of leachate." This statement needs further clarification and explanation of how the six-inch sand layer relieves pressure caused by leachate and eliminates the accumulation of leachate.

Section 3.7.1.5 - Leachate Conclusions and Recommendations
Item 2 of this section indicates that, "Moreover, following the installation of the landfill cover system, the groundwater mound will decrease, further improving the groundwater conditions beneath the Site." This statement should be further explained to understand why groundwater will decrease after the cover system has been installed, even though leachate collection is not a part of the RD.

Item 3 of this section states, "The ongoing presence and quantity of leachate emanating from the current seeps at the Site will not impact global or slope stability of the landfill." This sentence appears to indicate there are current leachate seeps at the landfill. The

second sentence of this item indicates that residual leachate will "percolate along the landfill slopes via the six inch gas venting layer, but will not impact the performance of this sand layer." This statement needs further explanation to fully understand how the capacity to manage gases under the liner by the sand, gas venting layer will be adequate in the presence of leachate within the sand, gas venting layer.

The details of the temporary leachate extraction wells need to be discussed in this section and the abandonment logs should be appended to the CCR.

Section 4.0 - Performance Standards
This section needs to discuss the visual identification of PCB-containing materials performance standard used on all property owned by Weyerhaeuser.

Section 4.1.1 - Asphalt Property
The total number of verification samples collected and analyzed needs to be summarized in this section.

This section needs to summarize the total approximate area for each property broken into base and sidewall areas used for verification sampling. Figures illustrating the locations of verification samples also need to illustrate the originally planned grid layout in addition to the final sample locations.

Section 4.1.2 - MDNR Property
This section incorrectly states the estimated number of samples to be seven, instead of nine.

This section needs to summarize the total approximate area for each property broken into base and sidewall areas used for verification sampling. Figures illustrating the locations of verification samples also need to illustrate grid layout in addition to the final sample locations.

This section needs to summarize the additional verification samples collected (VS-10 through VS-14) because of paper residual washout.

Section 4.2 - Verification Soil Sampling Analytical Results
The data validation memorandums referenced as provided in Appendix E in the last sentence of this section do not appear to be included in Appendix E.

4.2.1 - Asphalt Plant Property
This section identifies two areas that still contain paper residuals on the asphalt plant property. This section needs to document and explain what was done to document the physical presence of the residuals in the field and how exposure to the residuals will be controlled into the future.

Section 4.2.2 - MDNR Property
This section should reference Figure 4.2 for the location of the additional verification samples discussed in this section.

Section 5.0 - Construction Quality Control/Quality Assurance
Summary and documentation of achievement of the compaction standards for all appropriate materials need to be presented within this report section.

Summary and documentation of seeding and turf establishment need to be discussed within this report section.

Section 5.3.4 - Problems/Deficiency Identification and Corrective Action
This section needs to summarize the problems and corrective actions during the RA, including materials unavailability and substitutions, non-perched leachate, subgrade redesign because of lower than anticipated residuals volume, discharge of clean fill to the Kalamazoo River, and revision made to the groundwater vertical aquifer sampling (VAS) and monitoring well construction, for example.

Sections 5.5.3, 5.6.3, 5.7.2, 5.8.3 - Thickness Documentation
Documentation of thickness by survey data needs to be appended to the CCR.

Section 5.9 - Geomembrane
All the referenced laboratory and field testing need to be summarized and appended to the CCR.

Section 5.9.1 - Pre-Installation
This section indicates that two samples of the geomembrane materials were submitted to TRI Environmental, Inc. for destructive seam testing prior to use. The rationale for submitting two samples of geomembrane materials for destructive seam testing prior to its use needs to be explained further. It is not clear that seams had been completed prior to installation that would require destructive testing.

Section 5.9.2.1 - Defects/Repairs/Examination of Repairs
All the referenced defects and repairs (including horizontal and vertical coordinates for each repair) will need to be summarized and appended to the CCR.

Section 6.1 - Fugitive Dust Monitoring
The dust monitoring locations need to be shown on a figure and all analytical results for PCBs need to be appended to the CCR.

Section 6.2 - Surface Water Monitoring
The surface water monitoring locations need to be shown on a figure and all visual inspection reports and analytical data generated need to be appended to the CCR.

Section 7.1 - Deed Restrictions
A copy of the March 25, 2005, restrictive covenant needs to be appended to the CCR.

Section 7.2 - Fencing and Gates
The title of this section should be revised to include permanent markers and signs.

Section 7.3.1 - Summary of VAS/Follow-Up Groundwater Sampling Activities
This section needs to include a discussion of how the ten VAS locations translate into nine monitoring well locations. A figure showing the VAS locations needs to be included in the CCR.

The last sentence of the seventh paragraph needs to be revised to indicate that the shallow well screens were selected to be seven feet in length not ten feet as specified in the Final Design Report.

The second sentence of the eighth paragraph states, "The April 2011 round of groundwater samples were collected in an identical manner as the November 2010 VAS event, via low-flow sampling techniques." This statement is misleading as the 2010 data were collected during a VAS event using low-flow sampling techniques from a temporary monitoring well and the 2011 data were collected from permanent, developed monitoring wells using low-flow sampling techniques. The representative quality of groundwater between the two types of sampling events is not identical and the method of groundwater collection should not be referenced as identical. This statement should be removed from the CCR.

Figure 2.1
This figure is titled "Pre-RA Site Conditions"; however, it includes boundaries for excavation completed as a part of the RA (in August 2010 and January 2011). The legend for this figure identifies "Previously Delineated Limits of Paper Residuals" and "Previous Excavation (completed August 2010)" as the same line type. Additionally, it appears that the pre-remedial action delineated limits of paper residuals are not shown. This figure needs to be revised to illustrate and support the text in Section 2.2.4 of the CCR.

Figure 4.2
The two areas of sampling should be labeled to differentiate the original excavation area and the area excavated because of paper residuals washout from a storm event.

Tables
All tables containing the data qualifier "R" need to identify why data points were rejected.

Appendix B - Photographic Log of Key Remedial Action Milestone
The photographic log does not include all key components of the RA as photographs from the 2007 emergency response actions have not been included.

Photographs of residuals consolidation from on-site and off-site sources, final site restoration, security components of the remedial should be included in the photographic log of the work.

Appendix D – Off-Site Disposal Documentation
The waste profile and supporting analytical data for landfill acceptance need to be included in this Appendix for the PCB-containing materials that were disposed of at Waste Management Autumn Hill Landfill as non-hazardous materials.

Appendix E
The data validation memorandums referenced as provided in Appendix E in the last sentence of Section 4.2 do not appear to be included in Appendix E.

At this time, the MDEQ does not believe the current draft CCR is fully complete or acceptable for documenting certification of completion of the OU4 RA or documenting certification of completion of the construction completed in 2010/2011. The MDEQ recommends that the USEPA provides these comments to the potentially responsible parties for evaluation and incorporation into a final CCR for the 12th Street Landfill site. The MDEQ looks forward to assisting the USEPA with this site in the future. If you have any questions regarding these comments, please contact me at your earliest convenience.

Sincerely,

Kristi Zakrzewski

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